

REMARKS

Applicant requests reconsideration of the claims in accordance with Rule 113 (Final Action) and Rule 116 (Amendments after Final Action). Applicant requests reconsideration of the application in order to advance the examination of the application to issue. Claims 25-47 are pending and Applicant is amending independent Claims 25 and 26. Claim 41 is canceled.

CLAIM REJECTIONS – 35 U.S.C. § 102

1,2. The Examiner states that Claims 25-32, 34, 37, 39-40, 42-46 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayward (WO. 97/26473).

Regarding Claim 25, the Examiner states that Hayward discloses a method of installing gaiters around a range of joints defined between joint members having different dimensions (bellows being connected to a universal joint, see Abstract). The Examiner states that the method having the steps, providing a range of gaiters (multiple of 10 having range of tubular sections 14-16, where 15 can be stretched to fit a larger shaft or same size shaft or smaller shaft, see page 13, lines 1-5) having different dimensions in which each end portion of at least one gaiter (one of 10 having 15) of the gaiter range incorporates a respective single annular fitting section or channel (section of 15), the range of joints dimensions being greater than the range of gaiter dimensions (this is the case since 15 will fit over larger dimensioned joints) and at least some of the gaiters in the range of gaiter being stretchable to fit two or more joints of the joint range so the joint range can be accommodated by the range to fit particular joint and applying respective gaiters around the joints such that two or more joints of different dimensions have applied thereto gaiters having the same dimensions and which are stretchable as aforesaid (in conclusion the section 15 of each gaiter is stretchable over different dimensioned joints).

Applicant wishes to point out that Hayward (WO. 97/26473) does not refer to the degree of stretch which the gaiter described therein is capable of. Furthermore, as the Examiner has acknowledged, Hayward does not refer to the wall thickness of gaiters nor the specific material from which the gaiter is made.

While Hayward does refer to the fact that the gaiters described therein are stretchable in order to fit joints of different sizes (page 9, lines 5 to 9) it is clear from the general teaching of Hayward that this stretching is such as to facilitate fitting of the gaiter rather than permanent stretching to fit over a wide range of differently sized joints. In fact, it is well known within the art that permanently stretching rubber material compromises its integrity as it is susceptible to attack from ozone. The present invention has overcome this problem such that permanent stretchability of 115% can be achieved.

Applicant is amending Claim 25 and Claim 26 to now call for "...at least some of the gaiters in said gaiter range being permanently stretchable to a diameter which is 115% of the respective unstretched end portion diameter in order to fit two or more joints of said joint range...". Applicant points out that Hayward does not either implicitly or explicitly disclose a gaiter with a permanent stretch capability of 115%. Therefore, Applicant believes that the present invention as recited in Claims 25 and 26 (as amended) is not anticipated by Hayward and that Claims 25 and 26 (as amended) are now patentable. Likewise, Claims 27-32, 34, 37, 39-40, 42-46 and 47, which are dependent on allowable Claims 25 or 26, are now patentable.

CLAIMS REJECTIONS – 35 U.S.C. § 103

3,4. The Examiner states that Claims 33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward in view of Lammin (GB. 2,320,067).

The Examiner states that Hayward discloses the gaiter to have a thickness that can be constant or varying but fails to disclose the thickness to be 2mm. Lammin discloses the wall thickness of the bellows being 2mm (page 5, lines 30-33). It would have been obvious to one

having ordinary skill in the art at the time the invention was made to configure the thickness of the gaiter to be 2mm as taught by Lammin, to provide a specific flexibility (since thickness and flexibility are related as if a piece is thick than less flexibility and vice versa, evidence is showed Hayward by page 6, line 20-page 7, line 2, describes how wall thickness will relate to flexibility).

Applicant wishes to point out that Lammin refers to a pump seal which has a bellows like central portion. The seal is used in pumps which typically pump slurries, pastes and semi-solid materials (page 1, lines 1-4). The purpose of the seal is to prevent pumped material from entering the hollow shaft in which it is located.

The gaiters used in motor vehicle joints are very different from the pump seals described in Lammin, with the gaiters being subjected to a whole range of different stresses. Therefore, it is submitted that one skilled in the art wishing to manufacture a flexible, permanently stretchable gaiter would not look to a document relating to pumps and seals. Therefore, it is inappropriate to combine Lammin and Hayward.

Further, there are several statements in Lammin which would discourage one skilled in the art from applying the features therein to the manufacture of the gaiters of the present invention. In order for a gaiter to perform its function it must be axially flexible, stretchable and undergo a degree of radial movement. Lammin describes a seal which is relatively stiff. (page 4, line 27), particularly in the mid-portion (page 6, lines 1 to 3). Such a feature would not be suitable for gaiters. Furthermore, Lammin makes no mention of the stretchability of the gaiter and gives no reason for the wall thickness mentioned at page 5, lines 30 to 32.

Therefore, after reading Lammin one skilled in the art is not taught anything of the physical properties required to produce a stretchable gaiter. Furthermore, since Lammin states that the gaiter is relatively stiff, and discloses a wall thickness of about 2mm, one skilled in the art would not associate such a thickness with stretchability.

In addition, conventional gaiters have much thicker wall thickness in order to provide strength in the fitting area at the wide end. This thickness continues throughout the gaiter. In order to make the gaiter more flexible, the wall thickness has been reduced. However, permanently stretched rubber is susceptible to attack by ozone, clearly this is amplified with thinner rubber. However, surprisingly the present invention has been shown to be significantly less susceptible to attack by ozone than conventional gaiters and due to its thinner wall thickness is a more flexible and versatile gaiter.

Therefore, having regard to the general teaching of Lammin it does not necessarily follow that a rubber seal gaiter having a wall thickness of 2mm will necessarily be stretchable and as such Claims 33 and 35 are not obvious from Hayward in view of Lammin. Applicant believes that Claims 33 and 35, which are dependent on amended Claim 25, are patentable.

5. The Examiner states that Claims 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward in view of IBM Technical Disclosure Bulliten, July 1984 (referred to as IBM).

The Examiner states that Hayward disclose the invention substantially as claimed above but fail to disclose the rubber to be a neoprene compound having a 550% at break and 115% diameter stretchability without 10% change in the properties of the gaiter rubber (this is the case due to the bellow to be made from neoprene rubber compound). IBM discloses a bellow that is made of neoprene rubber compound (IBM discloses the bellow to be made from the same material as claimed by the applicant, hence IBM bellows has neoprene rubber compound having 550% at break and 115" diameter stretchability without 10% change in the properties of the gaiter rubber).

Applicant wishes to point out that the Examiner has indicated that since the IBM disclosure refers to neoprene rubber bellows, then the physical properties referred to in the present invention are implicitly disclosed in the IBM disclosure. As the Examiner has acknowledged,

the present application refers to a synthetic rubber compound and not to neoprene compound. In fact, neoprene is a Dupont trademark which is used as the generic name for polychloroprene synthetic rubber. There are now dozens of variations of Neoprene. Furthermore, in a commercial rubber compound, typically 30% of the compound would be a base polymer such as Neoprene and the remaining 70% would be made up of many other components used to influence the properties of the final rubber compound. Therefore, the use of the word "Neoprene" gives very little, if any, information about the characteristics of the rubber compound.

Furthermore, "IBM" refers to a bellows which are attached to a platform, and therefore move in only an axial direction. Therefore, it is submitted that one skilled in the art would not consider such a document when attempting to provide a gaiter which is permanently stretchable in a radial direction. Furthermore, as "IBM" does not provide information regarding stretchability of the bellows one skilled in the art is unlikely to turn to this document when seeking a solution to the problem of how to increase radial stretchability. Moreover, the benefits of the present invention in terms of its resistance to attack by ozone cannot be gleaned from the "IBM" document. Hence, Applicant believes that Claims 36 and 38 are not obvious from Hayward in view of IBM Technical Bulletin, July 1984, and that Claims 35 and 38, which are dependent on independent Claim 25 (as amended), are patentable.

6. The Examiner states that Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward. The Examiner states that Hayward discloses the claimed invention except the one or both end portions are radially compressible to a compressed diameter which 98% of the uncompressed respective end portion diameter. However, Applicant has canceled Claim 41.

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In view of the above, it is submitted that Claims 25-40 and 42-47 as amended are now in condition for allowance. Reconsideration of the rejections to such Claims is respectfully requested. Accordingly, it is requested that Claims 25-40 and 42-47 be allowed and the case be sent to issue.

If there are any questions, we urge the Examiner to call us. Please charge any costs in connection with this document to our Deposit Account No. 16-0875.

Respectfully Submitted,
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